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ABSTRACT

This 10-year study compared the achievement of 3 samples of students designated at-risk for school failure and 1 sample deemed not at risk, and followed a transitional first-grade school readiness program (SRP) population from prekindergarten through eighth grade to identify contextual factors associated with student progress. At-risk samples were students in a transitional first grade (SRP); students recommended for the transitional program but not placed (SRP-NP); and students retained in kindergarten, first, or second grade (RET). A sample of promoted students (PRO) was designated as non-risk. A group of students held out (HO) for a year prior to kindergarten had unknown risk status. Data were collected through readiness tests, teacher ratings, parent surveys, standardized achievement tests, report cards, and other school records. Outcomes were contrasted for comparative analysis between samples. Results indicated that SRP students underachieved the PRO students on all salient measures from second grade onward. They did not perform better than the SRP-NP group on any achievement measure. SRP students rated as aggressive (close to 35 percent) had lower achievement than nonaggressive SRP students. SRP students were subsequently referred to and placed into special education by second grade more often than PRO students, SRP-NP students, and HO students, but at the same rate as RET students. The most significant early risk factors for poor achievement among SRP students were increased age and distinct aggressiveness. Successful SRP students had higher initial achievement test scores and mothers with higher levels of education than nonsuccessful SRP students. Initial kindergarten behavioral and parental factors were better predictors of second-grade achievement than readiness measures. Ratings of personal-social deficits in kindergarten predicted lower seventh-grade grade point averages. (Contains 131 references.) (KDFB)

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Running Head: Transitional First Grade, Held Out, Retained and Promoted Outcomes

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# Transitional First Grade, Retained, Held Out and Promoted Samples: An Explanatory Summary of Initial and Concomitant Longitudinal Academic and Behavioral Findings

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Abstract

This study details a ten year controlled investigation of outcomes among three samples of students designated at risk for early school failure and one sample of students deemed non at risk, and follows a transitional first grade school readiness program population from prekindergarten data through eighth grade outcomes examining parental, demographic, social, cognitive, academic factors and enrollments in support entitlements. Outcomes are contrasted for comparative analysis between samples. Unique and highly significant interactive findings and concomitant effects of initial readiness, age, demographic and behavioral variables as well as profiles of successful and non successful academic/behavioral outcomes are reviewed. Further research topics are presented.

# Transitional First Grade, Retained, Held Out and Promoted Samples: An Explanatory Summary of Initial and Concomitant Longitudinal Academic and Behavioral Findings

Extra-year assignments are frequently assigned to children who are considered at risk for early school failure (Kaminski & Carey, 1993; Meisels, 1992, 1995; Shepard, 1989; Siegel & Hanson, 1991). Kindergarten grade repetitions in particular, are often recommended for children declared at risk, systemically offered to help relieve first grade teachers from the encumberments of intensifying curriculums and increasing numbers of ill-prepared students (Fowell & Lawton, 1992; Kagan, 1990; McGill-Frantzen & Allington, 1993; Patton & Wortham, 1993; Shepard, 1990; Shepard & Smith, 1985). Two-tiered kindergarten programs are also chosen for students screened as developmentally delayed (Earley, 1995; Phillips, 1992). Holding children out of school entry is another option typically chosen by discrete parents due to readiness or 'red-shirt' accentuations (Bellisimo, Sacks & Mergendoller, 1995). 'Gift of time' transitional/junior first grade programs are endorsed for the 'immature' child, providing the young or hurried child an opportunity to develop emerging skills in a less stressful environment than within regularly promoted first grade classrooms that do not offer developmentally appropriate practices (Arkley, 1986; Bryant, Clifford & Peisner, 1991; Cherry, 1996; Elkind, 1981; Uphoff, 1995).

Transitional First Grades. Transitional classes reflect the persuasion that children should be 'developmentally' ready for school, that chronological age alone is not a sufficient criteria for first grade promotion and that many children who entered first grade 'not ready' suffer in terms of frustrations, discipline problems, poorer grades, lowered self-esteem and grade failure (Uphoff & Gilmore, 1985). Transitional

recommendations derive part of their unique endorsement from a belief that "maturationally delayed" children's needs are different from those of children promoted ahead, retained in typical grade replacement retentions, or of children placed in two-year developmental programs (Gredler, 1992; Uphoff, 1990). Supporters of transitional placements assert that inclusive interventions do not help the "immature child," that only time can develop maturational needs (Elkind, 1981; Grant, 1986; Hammond, 1986, Reed, 1988), insisting that the transitional year is not a retention because retentions produce different effects than a transition replacement and that placed students do not perceive similar a experience in a transition setting as with a grade repetition (Uphoff, 1995, p. 143).

In part, due to push-down curriculums of the 60's and the tangential argument that some children are not biologically ready for first grade, readiness room programming was implemented in the 70's, deriving two primary clusters of progeny, the summer birthday child who is chronologically young, and the child who is assessed to be 'maturationally immature' (Caril & Richard, No Date; Elkind, 1981; Grant, 1986; Uphoff, 1995; Uphoff, Gilmore & Huber, 1986). While little actual research has been garnered on the argument of a true construct of a 'maturationally delayed' child, or the identification of such, there has been research on the relationship of children's chronological age and early school performance (Kinard & Reinherz, 1986; May & Welch, 1986). Basing much of the justification for transitional programming on chronological age research (and the absence of implementation of developmental appropriate practices within the regular classroom), transitional placements were adopted. Citing personal theoretical orientations, anecdotal accounts, selected studies, and often testimonial repertoires in support, transitional grade replacements are endorsed (Frick, 1990; Galloway & George, 1986; Uphoff, 1990; 1995; Vann, 1991; Walker, 1992).

Research Outcome Background. Most research studies and refereed discussions provide a uncomplimentary perspective on the actualities of controlled transitional outcomes or of maturational theoretics (Kagan, 1990). Controlled investigations underscore that placed students typically tend to reestablish their academic delays within two-three years of placement, regardless of the criteria used in placement decisions (Kagan, 1992). Controlled studies note little effectiveness for school readiness program (SRP) placements when compared to controlled samples (Dennebaum & Kulberg, 1994; Holmes, 1989; House, 1990; Lawton & Viadero, 1995; McGill-Frantzen & Allington, 1993; Shepard, 1989; Smith & Shepard, 1987, 1988).

Studies indicate that transitional populations do not shed academic or behavioral delays nor do they keep up with promoted grade-level students (Karweit & Wasik, 1992; Meisels, 1992,1995; Shepard, 1991), a point noted by early childhood education associations (Bredekamp & Shepard, 1988; Dean, 1992). The additional year does not appear to circumvent the deficits that placed students possess, with studies noting two-to-four times the special education placement rates within extra-year populations than promoted (Ferguson, 1991; Fishchl, 1994). However, some reports do denote benefits of extra-year programming (see Gualtieri, 1993 and Uphoff, 1995 for reviews), although study design is often weak. Maturation alone is clearly not the answer for 'unready children' (Boettger, 1994; Meisels, 1995; Ostrowski, 1994), yet despite wide-spread criticisms, placements are a commonplace occurrence (McGill-Frantzen & Allington, 1993; Nason, 1991; Patton & Wortham, 1993; Rhoten, 1992; Shaeffer & Hook, 1993a).

Weakness of Previous Studies.

An extensive search of the literature finds over three hundred citations regarding transitional first grade programming, including books, chapters in books, articles,

papers, reports, studies and numerous commentaries in a wide variety of publications from refereed journals to newsstands publications. In regards to investigative reports, there have been approximately seventy actual studies on transitional first grade programming, excluding two-year developmental programming or kindergarten retention. Many of these studies however, examine demographic or frequency surveys, curriculum concerns, case studies, ethnographic investigations, breath of practices, identification and measurement issues, parental opinions, teachers' attitudes and a sundry of implementation topics. In terms of actual outcome studies, that is, investigations which have examined the effects of placement on student academic and behavior/social outcomes, there have been around four dozen studies (see Berkey, 1994; Ferguson, 1991; Fishchl, 1994; Gredler, 1984, 1992; Iovino, 1992; Karweit & Wasik, 1992; Leinhardt, 1980; Shepard, 1989; and Uphoff, 1995 for references).

Transitional Outcomes. Outcomes studies can and are often discussed with differing orientations. As an example, one reviewer may note an outcome between study samples denoting benefits from placement (i.e., a comparison between the treatment and a comparison sample) and another's review will denote from the identical research report an outcome comparison of the treatment sample with the (or a) matched control sample (Gualtieri, 1993; Karweit & Wasik, 1992; Shepard, 1989; Uphoff, 1995). Equivalence between initial samples can be a central theme of discussion for one reader whereas another reviewer will focus on a treatment outcome regardless of the validity of the study's research design or comparative sample. As Uphoff (1995, pp 99-100) notes, surveys of early grade teachers, as well as of parents of placed children generally give high marks for transitional classes, yet as Karweit & Wasik (1992) reports, opinions of parents or teachers have little to do with the actually outcome of controlled investigations of SRP student outcomes. Thus, as with the Shepard (1989) and the Uphoff (1995) reviews, two differing perspectives can be derived from reviewing original reports.

Most research studies do not make it to refereed journals, and those that do may be biased towards studies that do not find significance. Given that 'true experimental' designs are not used in transitional studies, threats to external validity can be found; however, even with poor research methods or of a researcher's affiliation's potential bias, outcomes of transitional placement can be in actuality, statistically favorable, an extra year's placement in school may help children sustain academic progress even though an investigation was poorly constructed. As Meisels (1991, p. 32) notes, "it is possible that middle and upper income students who have been held out will form a subgroup of average students."

Purpose of the Study. Investigations have provided comparisons of placed and non placed samples, however, initial comparison data is often sparse conferring little validity of results; most transition studies do not provide robust initial comparative data between experiment and control groups. Occasionally, studies have investigated, initially equated (or matched samples) where both samples were equally recommended for transition placement, and where made, samples that have equated/matched comparability in terms of race, gender, SES and ability hold far more research weight than studies that do not report sample comparability. Few studies provide initial supplementary and contextual data about student backgrounds which can be useful in exploring important concomitants and interactions of placement. Research publications rarely delineate a school's circumstantial factors such as preferences for placement decisions among retention, transition and/or promoted samples with regard to students' abilities, behaviors, skills, services provided and other acquirements. Customarily, studies have not examined auxiliary outcomes other than standardized academic outcomes nor investigated contextual social-behavioral factors aligned with pupil progress. When studies have, they often used teacher ratings. Other than Ferguson (1991), studies are not noted to have employed blind outcome ratings of teachers,

ensuring greater validity of results.

In short, research has not answered the question if the practice denotes differential outcomes among those placed in terms of initial readiness, behavioral and demographic concomitants. Given norm distribution theory, some students ought to be able to maintain sustained academic and behavioral success after placement. Who are these students? Do successful SRP students hold initial superior readiness, demographic and behavioral profiles? How are retained sample outcomes specifically different from those of SRP samples? How much is gender, demographics or behavior a factor in terms of outcome when interacting with variables such as parental level of education?

The present study was designed to help answer these questions and follows a transitional first grade population for ten years, from prekindergarten data through eighth grade outcomes examining parental, social, school services and academic factors. Preliminary reports of this study have been reported of second grade findings (Ferguson, 1991), and briefly of fourth grade outcomes (Ferguson and Streib, 1996). The intent of this study is to examine "contextual factors aligned with accountability of pupil progress outcome among SRP students" (Ferguson, 1991, p. 140.) .

## Methods

This study of a transitional first grade school readiness program involves: a quasi (pre/post test) experimental design with initial equated samples of transitional first grade and transitional recommended but not placed students; a quasi experimental of transitional first grade with a random sample of promoted students; an ex post facto investigation of retained, promoted and a held out (prior to kindergarten) sample.

### Participants.

School Readiness Program (SRP) sample was identified in the spring of kindergarten as developmentally delayed and at risk for early school failure, subsequently being placed into a full year transitional first grade program between regular kindergarten and first grade. Decision for placement was based upon a kindergarten/first grade team's recommendation, using readiness assessment data obtained from testing, performance and observational measures. Parental approval was sought and secured for placement. Around thirty-five percent of the kindergarten class studied was assessed for possible SRP placement with twenty-three percent of the kindergarten class SRP placed. The SRP classroom, established in each of four elementary schools in the district studied, had approximately 13-16 students in each.

The SRP sample is designated as an at risk sample provided an extra year of school. SRP sample size in second grade was 48 (24 males/24 females). Chronological age in February of 1990 during second grade was 104.2 months, skewness .70. Placement percentage in free/reduce lunch programming was twenty-one percent in second grade. A review of school records (conducted in 1996 when the SRP students were in eighth grade) found one females SRP student retained back a year with a seventh grade GPA of .64 and a fifth grade standardized achievement test composite of 35.

SRP Recommended But Not Placed (SRP-NP) sample was composed of students who were recommended for SRP placement (found eligible and team recommended), but not placed in large part due to either enrollment limits and/or parental request. The SRP-NP sample had near identical gender equivalency and near identical age means (at entrance in kindergarten) as the SRP sample. They also had austere statistical equivalency to that of the SRP placed sample on two measures of school readiness: Gesell School Readiness Tests scores; student's chronological age minus their Gesell developmental age score, a developmental delay statistic (G-D); and the placement

teams' decision of need for placement.

The SRP-NP sample was assigned to this study during second grade based upon an ex post facto investigation of school records and documentation. The SRP-NP sample is designated as an at risk sample not given an extra year of school and is equated with the SRP placed sample in terms of gender, age at entrance to school, free/reduced services, somewhat for mother' level of education, SRP team recommendation and developmental delay measured by two methods. Placement percentage in free/reduce lunch programming was sixteen percent in second grade. Sample size in second grade was 19 (9 males/10 females). Chronological age in February of 1990 during second grade was 94.7 months, skewness -.85. A review of school records conducted in 1996 when the SRP-NP students were in eighth grade did not find any of the SRP-NP students retained back a year.

Promoted (PRO) sample of students was composed of two random samples of non at risk students, that is, students not held out prior to kindergarten or retained in kindergarten through eighth grade, nor recommended for a retention (kindergarten through second grade), or SRP placed or recommended.

The stratified random (SR) sample was selected and assigned to the study in fall of kindergarten and represents a random sample of kindergarten students not recommended for kindergarten retention or SRP placement. A random (R) sample was selected in spring of second grade and represents a sample of students never having been retained, held out nor recommended for SRP placement based upon an ex post facto investigation of school records. The PRO sample combines the students from the SR and R sample.

The PRO sample is designated as a non at risk sample. In second grade the spring

standardized achievement mean for this sample was determined at the 80th percentile. Sample size in kindergarten (using the SR sample) was 32 (14 males/18 females). The PRO sample's size was 45 (21 males/24 females) in second grade. Chronological age of the PRO sample in February of 1990 during second grade was 96.7 months, skewness -.59. Placement percentage in free/reduce lunch programming was eleven percent in second grade.

Retained (RET) sample consisted of students retained in kindergarten, first grade or second grade in an other than a SRP extra-year placement or a prior to kindergarten hold out. The RET sample was assigned in second grade based upon an ex post facto investigation of school records and is designated as an at risk sample. Eleven percent of the second grade class was retained in kindergarten, first or second grade, although a few of the RET students had been SRP recommended but not placed due to SRP class size restrictions or parental request. Sample size in second grade was 25 (16 males/9 females). Chronological age in February of 1990 during second grade was 105.7 months, skewness -.12. Placement percentage in free/reduce lunch programming was fifteen percent in second grade.

Held Out (HO) sample consisted of students held out a year prior to entering kindergarten. The HO sample was assigned in second grade based upon an ex post facto investigation of school records. Seven percent of the second grade class was held out prior to kindergarten. The exact status (e.g., risk or non at risk) of HO students (i.e., "red-shirted" at home) is unknown. The HO sample is suspect as being designated as at risk because there is no initial data suggesting an at risk status. The parental decision to hold a child out of kindergarten entrance tends to entail a greater access to educational alternatives prior to kindergarten (i.e., preschool, enriched home environment, higher socioeconomic background or parental income) than in families that have students retained from school-based decisions (Cosden & Zimmer, 1991;

Kindergarten retention, 1991; Laidig, 1991; Love, Logue, Trudeau & Thayer, 1992; Patton & Wortham, 1993; Shepard, 1990).

The present study found higher mother's level of education and a lower rate of free/reduced recipients and kindergarten behavioral problems within the HO sample than RET or SRP samples. Second grade achievement was high for the HO sample. The high percentage of males to females suggest some similarity to the RET sample, but not in terms of kindergarten and second grade outcomes and parental demographics. Sample size in second grade was 16 (10 males/6 females). Placement percentage in free/reduce lunch programming was seven percent in second grade. Chronological age in February of 1990 during second grade was 103.3 months, skewness .83

Caveat: SRP-NP, HO and PRO students were students in kindergarten when the SRP students were in SRP placement. RET students, having been retained in kindergarten, first or second grade joined the other sample students depending upon the year of their retention. HO students joined SRP students in kindergarten. PRO and SRP-NP students are almost a year younger than SRP, HO or RET students.

Each of the five samples had identical exclusion caveats/cohorts, that is, no prior to first grade special education services (other than speech but not language), being non-Caucasian, bilingual, receiving English as a second language services or having a physical disability condition. All students that were referred for special education during kindergarten (other than speech, but not language) were excluded from the study. Sixteen students were excluded from the study (within the five groups studied) based upon the exclusions.

It should be noted that during the first two years of the SRP program (1987-1989) there was an effort to maintain near equal gender distributions among SRP

participants. This was accomplished by the program administrator, in part, to avoid a preponderance of male students and further, possible negative modeling from a predominant male 'at risk' population. The gender distribution of SRP students after 1988 soon became 65-70 percent males (however in one class of thirteen, all students were male in 1993) and maintained this general ratio till 1995 when the program was discontinued. This 65-70 percentile male-female ratio is commonly found in transitional programs (Meyer, 1993; Rhoten, 1991).

A general SRP guideline was not to place students with significant cultural diversity or with articulated special needs (e.g., special education, clear environmental histories/issues). Such students were alternatively placed in kindergarten retention and/or promoted ahead with support services. The RET sample may therefore contain students representing a differential sub sample of students than SRP students, particularly for students who were kindergarten retained.

District-wide, about four percent of the general student population reflects culturally diversity backgrounds. The general population of the community (size @ 12,000) tends to be working class. Within the school district about twenty percent of the student population moved away from the community between 1986-1991, due to an economic down sizing in oil/gas production and the recession of 1985. Two samples (HO & RET) were not noted in the 1991 (Ferguson) article, but were contained in the study, as noted in the ERIC article cited in Ferguson (1991).

This author was district-assigned to study SRP outcomes when the SRP sample was in second grade (1990). .The SR sample, along with the measurements from the Metropolitan Readiness Tests were selected by other staff members during the SRP's placement year (1987-88). In 1990, close to forty percent of students enrolled in second grade were a year older than expected. Thus, given the developmental philosophy

of the district, the high percentage of year older students and some notability of a parental emphasis of giving boys an extra 'red-shirt' year in school (e.g., one principal noted, "It is the one advantage that I can give my son"), the SRP population may hold some demographic differences than other SRP samples that do not retained kindergartners or have a lower percentage of SRP placements.

## Measures

Brigance K &1 Screen. The BRI-S was administered in spring of prekindergarten to the entering class of the SRP sample, but was generally discontinued in the district there after.

Gesell Readiness Tests. The Gesell was administered in spring of kindergarten and scored in 3-month intervals (GES-S) from the composite. Evaluations were carried out by Gesellian-trained teachers and conducted, on the whole, with students deemed at risk for first grade promotion. A developmental delay (GES-DD) statistic was compacted by taking students' chronological age in months (at time of Gesell testing) and subtracting the obtained Gesellian age score (in months) from the sub test composite; higher values denote greater developmental delay in month units. This value adds chronological age to the concept of a 'maturational' delay.

Metropolitan Readiness Tests. The MRT (1976 Edition) was administered in early Fall and late Spring to the SRP sample, just Spring for the SR sample with national percentile shown of the Quantitative Composite (QC) and the Reading Composite (RC), using Fall and Spring kindergarten norms.

Teacher Ratings. The Total Teacher Ratings Domain (TTR) was composed of six 3-item (1-9) Likert-type sub domain scales (Social Skills, Performance, Engagement,

Success-SUCC, Self-Esteem-SE, and Attentivensss-ATTN), with a total of 162 points possible. Teacher ratings were measured in early spring of second grade and were obtained from second grade teachers' blind ratings. An aggression (AGG) domain was also secured and again in early spring of eight grade using a 0, 1 & 2 rating scale, asking teachers (with eight grade teaching team of the middle schools to do the eighth grade rating) to rate students on aggressiveness. A "2" rating was used in nominal variable analysis. A composite AGG/SOC variable was formed by combining teacher's ratings of student's "aggression" (if rated "2") and the rating of "need for teacher assistance of social/behavioral problems" (if rated a "2"), for a continuous (0-2) scale. A hyperactivity (HYPER) domain was secured in second grade using the same metrics as the aggressive domain. Teachers/teams were unaware of the purpose of the ratings; see Ferguson, 1991 for details of the second grade blind ratings.

All SRP, SRP-NP and PRO students were rated with the TTR and accompanying supplemental ratings, however less than a third of the RET and HO sample were teacher rated with the TTR; this was due to the author expanding the scope of the study to include all RET and HO students within the second grade class. In early Spring, at the time of the TTR, the study did not include the RET and HO samples as a complete representation of the entire second grade class, but did by the middle of April for second grade SRA-C.

Parent Surveys. Surveys were conducted in spring of second grade using a mailed survey, with a fifty percent return and followed-up using the eighth grade middle school teams to secure Level of Mother's Education (MLofED), with a ninety-six percent completion rate. The parent survey asked the respondent to rate their family and child on a variety of topics (Ferguson, 1991). MLofED used a six-scale range of (1-6): grade school, some high school, high school graduate, some college, college graduate and graduate school. A value of education (VALUE) Likert-like scale was also

secured, asking parents to rate how much value they place on their child's educational future.

Standardized Achievement Testing (SAT). The SRA Series Test (SRA) was administered across the district in late April of each year with national percentile scores shown of the composite total test (SRA-C). A small percentage of students taking the SRA Series Test did not complete the entire battery due to absences, and therefore a composite can not be obtained.

The Stanford Achievement Test (STAN) Eighth Edition (Advance 2) was used in eighth grade, using the total battery (STAN-C) national percentile score as the achievement outcome. The Stanford also includes the Reading Vocabulary (STAN-RV) and the Thinking Skills (STAN-TS) subtests. As a general estimator of mental ability, either of these subtests (as well as a composite compact of - STAN-IQ) can represent a measure of general intelligence since measures of vocabulary knowledge are known to present consistent coefficients of (e.g., @ .70) with composite/full scale measures of general intelligence. Correlations in this range are noted in the literature and were found in a review of several current intellectual and achievement battery manuals. SAT outcomes themselves can be suspect if there are questions as to a students' integrity in taking the test (e.g., cheating, not trying, etc.).

GPA. Grade point averages were secured from school records of seventh grade (fourth quarter), which is a composite full year's grade. GPA's typically reflect an overall deliberation (by teachers) of students' classroom skills (e.g., task completion, compliance, study skills, attentiveness, organization, academic skills, test scores, test taking skills, attendance, etc.). As a indicator of school success and employability, GPA more than SAT may reflect a student's potential for successful transition to the world of work. GPA may also reflect teachers' bias against students who do not possess teacher

pleasing behaviors.

Date of Birth. (DOB) used the age of students measured in month units as of February 25, 1990.

School Records of Related Services. Records from related services were analyzed and tallied for frequency (special education referrals, special education placements, social skills training, counseling services, free/reduced lunch, and remedial reading).

Kindergarten and Transitional Report Cards. An examination of the kindergarten report cards reveal three criteria items that related to personal-social functioning: "I handle problems and frustrations in acceptable ways" (HF); "I have a positive self-image" (PI); "I cooperate with others" (CO). These items were rated "satisfactory" or "needs additional work" by teachers at the end of the first and second semester of kindergarten. "Needs additional work" ratings were tallied (e.g., K-PSF) for a negative continuous variable (e.g., higher values indicating a child with additional work needed in the area of personal-social functioning), with a possible high of six.

Transitional report cards were examined and noted "Yes" for goals met and "Progressing" for goals not met on two domains of interest: Social Skills and Study Skills, each comprised of five items. By counting the number of items marked "Yes," a continuous measure was obtained with a total of forty possible (ten in each quarter), reflecting a positive domain (e.g, higher values indicate greater educational progress) called T-CSS, and for just the social skills, (T-SO).

When asked about the ratings, kindergarten and transitional first grade teachers generally noted moderating views of children's development that accept a variance of skills. Kindergarten and transitional first grade report card ratings may reflect (given

the context of the child's developmental age and philosophy of kindergarten/transitional first grade and the fact that report cards go home to parents), pliant views.

Comparison Procedures of SRP and SRP-NP Samples.

Controlled studies of SRP placed and non-placed sample have two methods of obtained comparison samples. One method is to have same-grade contrast reflecting matched or equated SRP-NP students who enter kindergarten in a subsequent year as SRP students, yet administering SRP-NP students the same initial measures as SRP students, a year later. Thereafter the SRP's retention year, both samples are in the same grade, with unequal ages. The other method is to have same-age contrast, again reflecting matched or equated SRP-NP students initially together in spring of kindergarten, but thereafter in differing/unequal grades (but same age) since the SRP placed sample has been retained. The author used the first method with equated (as opposed to matched) samples.

Same-grade comparisons address the question of comparability of performance between groups. However this method likely favors the older, retained (SRP) students in earlier years because they (the SRP students) are a year older in maturation. The fact that parental refusal was a component in the non-placed (SRP-NP) sample selection lends itself to the likelihood of possible preexisting differences (between SRP and SRP-NP samples) in children's parental backgrounds. These preexisting differences are however, equal in both methods of obtaining comparison placed and non-placed samples.

Limitations of the Study. Experimental mortality, size of samples, differing outcome measures across this study, and the fact that not all samples were given all measures are limitations of this study. The average percentage loss of subjects from second grade

through eighth grade was around twenty percent for all samples. SRP and SRP-NP samples are equated in terms of gender, age at entrance to school, SRP recommendation, free/reduced lunch, somewhat for mother' level of education, two developmental delay measures, and full team recommendation for SRP placement. Initial intelligence and readiness assessment across all samples would have have been helpful explaining concomitant effects, however other studies have explore intelligence interaction (Mantzicopoulos & Morrison, 1992, 1994).

Data Analysis and Presentation.

The results of the study are exhibited by Descriptive, Chi Square, Comparison and Correlation findings. The Chi Square Test for Variance was used to determined significant difference of incident rates of observation. Unpaired t-Tests (two-tailed set at $p$ .05) were used to determine significant difference between group means. Correlation coefficients and multiple regression was used to measure linear relationships.

Comparison findings are presented in terms of descriptive statistics and in terms of $p$ value comparisons between sample means. Comparison findings are noted within three frameworks: Significant Differences ($p > .05$), Near Significant Differences ($p >.15 - < .05$), and Non-Significant Differences ($p < .15$). Correlation coefficients are presented by sample. Results of the study are presented in Tables 1-8. Males and females breakdowns are discussed throughout the text. Slight metric differences noted from that of the 1991 ERIC publication (Ferguson, 1991) are due to increased efforts of school record reviews and the discovery that one SRP placed student was transferred to a kindergarten retention after SRP placement and one SRP-NP student was SRP placed subsequentially later in the school year.

## Findings

### Descriptive Statistics

Table 1 provides a summary of the obtained frequency, percentile and means from several demographics and outcomes. Means are provided for MLofED, second and eighth grade aggression, kindergarten K-PSF, second grade SE, SUCC, AGG/SOC and TTR. Second and eighth grade aggression scores represent the percentage of students rating a "2" on the aggression scale. Second grade referrals and placements (/) in special education are provided, with just placement in eighth grade. Male and female data is presented (/).

Females students generally performance better across all outcome measures. The SRP and RET samples noted a high rating of kindergarten and eight grade concern of personal-social functioning (K-PSF) and aggression. For the RET sample the noted concern of K-PSF occurred only for males. The HO sample did not record a notation of K-PSF concerns, which may reflect their year older status compared to the other samples, since in eighth grade many HO students did reflect aggressive concerns. The SRP sample maintained a relatively high percentage of aggressive students in kindergarten, second and eighth grade. All three extra year samples (SRP, RET and HO) exhibited a relatively high level of measured eighth grade aggression. For the SRP sample, a positive correlation of .46 was noted in terms of the correlation between K-PSF and eighth grade aggression, for the RET sample the correlation was .28.

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Insert Table 1 here

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Table 2 presents fifth grade SRA-C and seventh grade GPA outcomes split by gender and eighth grade aggression ratings. Aggression is noted as "2" (YES) or not (NO). All students given a school-designated extra year (SRP & RET) noted a seventh grade GPA mean of 2.6, whereas students not given an extra year of school (SRP-NP & PRO) noted a seventh grade GPA mean of 3.3. This difference was significant at the .001 level of confidence. All male students (n of 69) noted a GPA of 2.7, all females students (n of 55) noted a GPA of 3.2 with the difference noting a .02 p-value. ANOVA of overall fifth grade SRA-C outcomes with aggression as a factor noted a p value of .0002. ANOVA of fifth grade SRA-C with aggression as a factor split by gender, a p value of .01 was obtained. For the SRP sample, seventh grade GPA for students with an aggressive "2" rating was 1.3, and for students without a "2" AGG rating it was 3.1. SRP students with a "1" AGG rating (e.g., mild), tended to maintain a relative rubicund GPA, (2.7 for males and 3.4 for females with n's of 9 and 6 respectfully). A mild rating of aggression does not appear to effect SRP academic outcome as does the more distinct (e.g., "2") rating of aggression.

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Insert Table 2 here

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Table 3 notes eighth grade aggression, retention and gender factor effects on seventh grade GPA. Aggression has a pronounced negative relationship with GPA outcome. ANOVA of GPA with eighth grade aggression as a factor was significant at the p value of .0001. ANOVA of GPA with gender as a factor was significant at the p value of .01. ANOVA of GPA with eighth grade aggression as a factor split by gender was significant at the p value of .01 for females and .0007 for males. All students with an AGG "2" rating in eighth grade noted a GPA mean of 1.6 (n of 22). All students (n of 100) with a non AGG "0 or 1" rating noted a GPA mean of 3.2. All students (n of 44) with a "1"

rating on AGG (e.g., mild), noted a GPA of 3.0. ANOVA of GPA with retention as a factor was significant at the p value of .001. ANOVA of GPA with retention as a factor split by gender was significant at the p value of .03 for both genders.

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Insert Table 3 here

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Table 4 displays the achievement data (in national percentile means), presenting prekindergarten through eighth grade academic outcomes. Male and females means are presented as well as the total sample. In spring of the SRP's placement year, the SRP sample held a strong "readiness" advantage (e.g., plus 1.5 standard deviation or plus 6.2 standard error of the mean) over the SR sample. This advantage was found on both Metropolitan Readiness Tests Quantitative (t-Test p value of .0001) and Reading (t-Test p value of .0004) Composites. The standardized MRT readiness outcomes indicate that within two years of SRP placement, the SRP sample fell from the 87th percentile rank (using grade-based kindergarten norms from Spring of SRP placement), to that of the 27th percentile in Spring of second grade, and still lower in fifth grade.

From second grade through eighth grade, the SRP placed sample obtained similar standardized achievement status as the non placed (SRP-NP) sample, although seventh grade GPA outcomes for the SRP sample were substantially (p .02) lower than the SRP-NP sample in seventh grade, as was the GPA for the RET sample. The retained (RET) sample's higher (than the SRP sample) SRA-C scores in second grade may be due to a more recent retention (first or second grade retention) of the RET sample than the SRP's sample, since the two samples reflect similar fifth through eighth grade academic outcomes.

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Insert Table 4 here

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Chi Square Observed Frequency.

Table 5 presents nominal frequency analysis. Being retained (SRP or RET) or not (SRP-NP & PRO) noted a p-value of .01 in eighth grade in relation to the observance of aggressiveness. Retained populations noted a high frequency of aggression and special education services.

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Insert Table 5 here

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Comparison Findings.

SRP vs SRP-NP. Summary of p-values from t-Test comparisons are depicted in Table 6. The SRP placed sample, in contrast to the non placed SRP-NP sample, reflected similar (e.g., non statistically difference at the .05 level of confidence) second through eighth grade achievement and behavioral profiles, with the exception that the placed SRP sample was found to be more aggressive (p .03) than the SRP-NP sample in second and eighth grade, and found to have a lower GPA (p .02) in seventh. In terms of the TTR which is a composed of six 3-item Likert-type scale (Social Skills, Performance, Engagement, Success, Self-Esteem and Attending), the p-value for the SRP x SRP-NP comparisons noted the following values: .90, .50, .35, .87, .86, and .96 respectfully, and .67 for the total TTR. The SRP-NP sample notes near equal second grade teacher blind ratings of the SRP students without the extra year of school.

For SRP vs SRP-NP comparisons on the outcomes of second, fifth and seventh grade using the criteria of the younger half of the SRP sample and no aggression rating, the p-values are .05, .06 and .17, with the SRP sample noting a twenty-four percentile advantage on second grade SRA-C, a sixteen percentile advantage on fifth SRA-C over the SRP-NP sample, yet still a .4 disadvantage for seventh grade GPA.

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Insert Table 6 here

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SRP vs PRO. Most of the second grade SRP x PRO comparisons were significant at the .05 level (e.g., all SRA's; SE; K-PSF; special education referral; special education placement; counseling; remedial reading; AGG and AGG/SOC), suggesting that the SRP sample did not obtained a comparative standing with the PRO sample. The SRP x PRO comparisons note significant second, fifth and eighth grade SRA-C, seventh grade GPA, second grade aggression and self-esteem differences. The SRP sample underachieved the PRO sample, even though the two samples reflected near equal MLofED and free/reduced lunch frequency. The SRP sample never achieved statistical comparison with the PRO sample either behaviorally or academically. The PRO sample had the highest TTR ratings and achievement in second grade. Aggression for the PRO sample remained nominal in kindergarten, second and eighth grade.

The SRP outcome of dissimilar seventh grade GPA and MLofED than that of the SRP-NP sample and a statistical similarity to the retained RET sample denotes the similarity of the SRP and RET samples. Aggression ratings of the SRP sample in kindergarten and eighth grade indicated closer statistical similarity to the RET sample than the SRP-NP sample. By fifth grade (and throughout eighth), the SRP sample obtained similar (non

statistically different) academic performance outcomes (SRA-C or GPA) and frequency of ratings and special education placement as the RET sample. Statistically speaking, from the fifth, seventh and eighth grade academic and behavioral comparisons, the SRP sample is nearly distinguishable from the RET sample. In light of teacher's concern of a SRP recommendation for students with an environmental background of significance, The higher K-PSF's for the RET sample than the SRP sample appears to support the contention that RET students reflect a more 'at risk' initial status in terms of behavior.

When the criteria is selected to be at or below the mean age of the SRP sample (i.e., the younger half of the SRP sample, with a mean age of 102.6 or two months younger than the average SRP student), the t-Tests comparisons computed for this criteria sub sample noted p-values of .22, .51 and .33 for SRP vs PRO comparisons on second, fifth grade SRA-C and seventh grade GPA outcome; with no criteria selected the p-values were .05. Younger SRP students do better on achievement than older SRP students, and compare favorably with PRO students on the academic outcomes of second, fifth, seventh and eighth grade outcome. However, as will be delineated later in this article, early readiness values were higher for these younger SRP students, and their mean MLofED value. With no criteria, the SRP vs SRP-NP comparisons noted a significant difference on the seventh grade outcome. When the criteria is selected to be at or below the mean age of the SRP sample (e.g., the younger half of this SRP sample), the SRP vs SRP-NP comparison for seventh grade GPA still noted a .06 t-Test p-value.

Examining SRP and PRO t-Test comparisons of second, fifth grade SRA-C and seventh grade GPA, but selecting the criteria of only those students who have a 'no aggression' second grade rating (e.g., "0 or 1" but not a "2"), the obtained p-values were .36, .49 and .48, whereas with distinctly aggressive students (e.g., "2') contained, all three p-values were .05. It is the non-aggressive SRP child that performs better on academic outcomes, including seventh grade GPA. When the criteria

is the youngest half of the SRP sample and no aggression, the comparison t-Tests p-values for second, fifth SRA-C and seventh grade GPA (for SRP vs PRO comparisons) are noted as .69, .80, and .69; the young and non aggressive SRP students perform as well as with the PRO sample outcomes.

Held Out (HO) Sample Comparisons.

In regard to HO x RET comparisons, no significance was found although MLofED, K-PSF, and seventh grade GPA were near significance. For HO x SRP comparisons, MLofED was significant, eighth grade aggression was near significance, and seventh grade GPA was close to a near significance. For HO x SRP-NP comparisons, eighth grade aggression was near significance, but all other comparisons non significant. Lastly, for HO x PRO comparisons MLofED was significant, eighth grade aggression (p .06), and fifth grade SRP was near significant, with second grade SRA-C and seventh grade GPA non significant.

Correlation Coefficients.

Correlation of Age and Achievement.

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Insert Table 7 here

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Table 7 shows the age x correlates across ten years of administrations. Age-achievement correlation coefficients are displayed for total sample and gender sub samples; sub sample split by gender in which the sample n fell below 14 are not displayed. The SRP sample's correlation of students' age (month metrics) with

achievement showed consistently moderate-to-mild inverse relationships across prekindergarten (that is prior to SRP selection), transitional, second, fifth, seventh and eighth grade achievements.

SRP-NP correlations showed consistently moderate inverse relationships across second, fifth, seventh and eighth grade achievement. The RET age-achievement correlations were found to have inverse innocuous coefficients throughout elementary years but moderate inverse findings in seventh grade. The held out (HO) sample had moderate inverse findings for "same student" findings. Fourth grade RET findings were -.14 (Ferguson and Streib, 1996).

PRO age-achievement correlations were moderately positive in kindergarten and insipid for second through eighth grade. The positive and mildly moderate age-achievement relationship found in kindergarten for the SR sample is consistent with the generally accepted view of maturational age effects in early grade settings, where age is typically seen as a primary determinant of readiness (Freberg, 1991; Miller, 1995). The negative age-achievement coefficients found within the samples deemed at risk (SRP, SRP-NP and RET samples) contradicts the generally accepted view that age typically plays a positive and important role on school readiness and early achievement outcomes for all students.

The negative correlations suggest that older students within the samples designated as at risk (regardless of whether they are assigned an extra year) do poorer academically than their younger counterpart of students. Furthermore, for the SRP sample, the inverse maturation relationship occurs before kindergarten, during SRP placement and throughout elementary grades and into middle school. The inverse relationship is not due to teachers allowing students to recede in order for placement into special programming. This inverse age-achievement maturation effect (different

from normal or promoted samples of young children designated as non at risk) was first report in Ferguson & Streib, 1996, and to this author's knowledge has not be noted in the literature (Gullo & Burton, 1992).

Criteria Samples For Age Correlations. When the SRP sample was split by those achieving at or above the SRP MRT-RC mean on the Fall administration, the correlations did not change significantly. Regardless of entering level of readiness, the SRP sample maintained an inverse relationship across all measured outcomes of achievement, except the Gesell, which is a non metrically normed test. When the SRP sample is criteria selected to be at or below the mean age of the sample (the younger half of the SRP sample), the correlations did not differ significantly from the total sample, except on Fall MRT RC where the correlation was .09, with a n of 20. When the correlates for the SRP sample is criteria selected for only prekindergarten through SRP placement readiness measurements (excluding post SRP placement measures), the DOB correlates (n of 29) become -.49 (BRI-S), .28 (GES-S), .44 (GES-DD), -.16 (MRT-RC Fall), -.06 (MRT-QC), -.57 (MRT-RC Spring) and -.44 (MRT-QC Spring). Excluding the non-metric Gesell findings, it is the older SRP student who does poorer than the younger SRP student on early readiness measures.

Coefficients of Early Measures on School Outcome and Multiple Regression.

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Insert Table 8 here

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Correlation coefficients were established in order to examine contextual factors related to SRP student outcomes and are displayed in Table 8. In terms of Fall MRT-RC as the dependent outcome, the highest predictive correlate was that of the Gesell (GES-

DD). Using multiple regression, and adding DOB, the multiple R square was .399 with GES-DD adding the highest regression coefficient. For Spring MRT-RC, the social skills composite (T-CSS) from SRP teacher's report card ratings and the Gesell (GES-DD) along with DOB adding the highest correlates. The multiple R square was .612.

In terms of second grade SRA-C outcomes, K-C0 kindergarten cooperation rating held the highest of entry correlates; multiple R square was .644 with Spring MRT-RC adding the highest regression coefficients. In terms of fifth grade SRA-C outcomes, the BRI-S and Fall MRT-RC presented the highest correlates. The multiple R square was .649 with K-PSF adding significant regression coefficient, along with DOB, MLofED, DOB, AGGRESS, GES-S, BRI-S, TTR and Fall MRT-RC. A multiple R square of .989 was obtained adding the VALUE variable. In terms of seventh grade GPA, the multiple R square was .787 with DOB and ATTN adding the highest regression coefficient. With a small sample of 13, a multiple R square of .997 was obtained adding the VALUE variable.

SRP second grade teachers' rating of hyperactivity correlated .05, -.23 and -.07 with second, fifth grade SRA-C and seventh grade GPA respectfully. For the SRP sample, hyperactivity does not appear to have a strong negative relationship with readiness/achievement. However, when examining (not shown in Table 8) the random (SR and PRO) samples of hyperactivity correlates, the findings were -.21, -.28, -.41 and -.38 for Spring MRT RC, second, fifth grade SRA-C's and seventh grade GPA. Second grade teacher ratings of hyperactivity correlated -.60 with second grade SRA-C for PRO females. Hyperactivity does appear to have a strong negative relationship with readiness/achievement within a random promoted sample, but not within the SRP sample.

In terms of simple correlates, ratings of self-esteem and aggression held

coefficients for predicting long-term success higher than early readiness measures. The finding of a behavioral indices having more predictive weight on future academic outcomes than initial readiness (or intellect) variables has been found before (Hollis, 1995). Of all three early readiness measurements (MRT, Gesell and the BRI-S), the Brigance K & 1 and the Gesell Test generally held the highest, but only the Gesell when using a developmental delay (GES-DD) statistic which uses chronological age. The GES-S held poor concurrent and predictive correlatives.

For the SRP sample, seventh grade GPA correlated with eighth grade aggression {for continuous (0, 1, 2) and nominal ratings (0 or 1, 2)} as -.64 and -.70; for males it was -.61 and -.58 respectfully, and for females the correlatives were -.64 and -.85 for continuous and nominal aggression ratings, providing up to 72 percent of the explained variance. For females, seventh grade correlate of AGG/SOC was -.68. In terms of eighth grade aggression ratings and the STAN-C, the correlations for SRP, SRP-NP, PRO, RET and HO samples were -.45, .23, -.66, -.28 and -.70. For males, eighth grade correlate was -.58 and -.70 for SRP and PRO samples. Aggression rating held a strong negative relationship with academic outcomes in this study and others (VanSciver, 1993).

For the SRP sample, there was a -.19 correlation of K-PSF with second grade SRA-C, -.36 for females. There were other negative correlations of K-PSF and second grade SRA-C, RET (-.15), PRO ( -.61), and SRP-NP (-.35). K-PSF correlated .33 with second grade aggression for the SRP sample and .51 with the social skills (T-SO) during SRP placement. In terms of K-PSF correlates with TTR, there were high correlations across the samples: SRP (-.57), SRP-NP (-.42) and PRO (-.30). The finding of inverse relationship of aggression (e.g., non-compliance/poor social adaptability) with concurrent measures of readiness (-.36 for Fall MRT-RC) and predictive achievement (e.g., second grade SRA-C and TTR, fifth grade SRA-C, STAN-C

and seventh grade GPA) has been report elsewhere (Erhardt & Hinshaw, 1994; Hollis, 1995; Mantzicopoulos & Morrison, 1992; Pellegrini, 1992; Sanson, Smart, Prior & Oberklaid, 1993).

Criteria Selected Samples of Low and High Achievement Middle School Students

The PRO sample's outcome on seventh grade GPA represents the average achievement of promoted students, with a mean GPA of 3.14 obtained by this sample. By computing differing GPA criteria, it is possible to examine what percentage of what sample obtained a corresponding level of success. The SRP sample had forty-three percent of their population obtaining a 3.14 GPA while the SRP-NP sample noted eighty percent and the RET noting twenty-eight percent. Twenty-two percent of the SRP sample noted a GPA at or under 1.94 while no SRP-NP students noted such a GPA.

Seventeen (10 females and 7 males) SRP students maintained a 3.14 GPA or higher in seventh grade. Their BRI-S was 89.5 and Fall MRT RC was 49.6, which is far higher than the SRP sample as a whole, suggesting that the high achieving sub sample of SRP middle school students represented an initially high (e.g., 76th percentile) early readiness (e.g., Fall MRT-RC score) profile among these SRP students. This sub sample also had a high 74.8 mean on the SRA-C in second grade, a high 117.3 TTR, a low K-PSF (.29), and a high MLofED of 3.8. These students reflect little aggression, high early readiness and a mother with some college experience.

When a SRP sub sample is criteria selected to be at or below a 2.0 seventh grade GPA, this sample reflected an overall poorer profile on all early measures: 78.7 (BRI-S); 20.8 (Fall MRT RC); 48.3 (5th grade SRA-C); 22 percent in second grade receiving free/reduce lunch, counseling, and referred to special education; 56 percent rated aggressive in second grade or received remedial reading; 33 percent receiving

social skills class in second grade; 78 percent rated aggressive in eighth grade; and a mean MLofED of 3.0, AGG/SOC of 1.2, and K-PSF of 1.9. The SRP child that did poorly academically in seventh grade also did poorly readiness-wise and behaviorally initially.

Different SRP Early Readiness Profiles and Subsequent Outcomes.

High Fall MRT-RC Score. Using Fall MRT Reading Composite scores of the SRP sample and setting a criteria at or above the MRT RC mean of the SRP sample, the seventh grade GPA mean for this sub sample (n of 22, 10 males and 12 females) is 3.0. Their K-PSF was .35, second grade SRA-C was 72.2. TTR was 110.0 and fifth grade SRA-C was 73.4. These values present robust indications of early readiness, little aggression and continued excellence of school performance. SRP 'age x achievement' correlations obtained are similar to the correlates for the whole SRP sample. The correlates ranged from -.27 to -.62. with the mean of around -.45.

Low Fall MRT-RC Score. Using the criteria of at or below the SRP mean Fall MRT-RC, the resulting sub sample second grade and fifth grade SRA-C composite is 58.5 and 53.2, lower than the SRP composite as a whole, e.g., 66.2 and 63.6 respectfully. Females within this sub sample indicated lower profiles than males by about six percentage points, however a reverse gender standing was found for the seventh grade outcome of GPA, 2.1 GPA for males and a 2.5 GPA for females. The higher female standing on seventh grade GPA is perhaps reflective of the social adaptiveness of females over males.

Younger and Older SRP Students. When the SRP sample is criteria selected to be at or below the mean age of the sample (i.e., the younger half of the SRP sample), the early readiness measures noted higher values that the total SRP sample; BRI-S, Fall MRT-RC and QC composites were 88.6, 45.3 and 35.0. When the criteria was set of the older

half of the SRP sample, the readiness values become 83.3, 36.0 and 28.4. The older SRP child does poorer on initial readiness profiles (as reflect in the -.22 correlation of DOB with MRT-RC Fall, and -.37 with BRI-S). However for the promoted SR sample the DOB x MRT-RC correlation was .40, with the older half of the SR sample scoring ten points higher on the MRT-RC than the lower half.

Poor Kindergarten Behavior. When the SRP sample is criteria selected to be at "1" or more on the K-PSF kindergarten rating scale for personal social behavior (higher values indicating greater social-behavioral need), the sample (n of 10, six males and four females), noted five students with free/reduce lunch, a mean 2.8 MLofED, a mean 1.8 seventh grade GPA, a second grade ASS/SOC of 1.1, a SE of 13.3, a TTR of 85.1 and a Fall MRT-RC of 36.6, which reflect, in general, poor educational progress.

## Discussion

The SRP sample underachieved the PRO sample of promoted students on all salient study measures from second grade through eighth, even though the SRP students were a year older, had had an extra year of school and had an initial significant advantage (p .001) to that of the PRO sample going into first grade. The transition sample did not keep pace with the promoted sample, falling statistically (p-value of .05) behind in term of second grade self-esteem, second, fourth and fifth grade SRA-C, and seventh grade GPA. With regard to the control SRP-NP sample of students recommended for SRP placement but who were promoted ahead, similar to other findings (e.g., Schroeder, 1995), the SRP placed sample sample fell behind statistically (p-value of .01) in terms of seventh grade GPA, and did not achieve a statistical superiority above the year younger at risk controlled SRP-NP sample on any positive measure of school achievement.

The SRP sample did not statistically surpass their controlled (equated) counterpart of non-placed SRP recommended students; the SRP-NP sample obtained near equal (to the SRP placed sample) standardized SRA achievement scores in second, fifth and eighth grade, near equal rating of second grade self-esteem and success without an extra year's school placement or of a year's biologic maturation. The SRP-NP sample statistically (p-value of .01) outperformed SRP students on seventh grade GPA outcome, and held such an advantage regardless of aggressiveness, age or of MLofED criteria, although not always statistically significant.

Aggression. Aggression had a significant negative correlate with outcome, e.g., p-value .03 for fifth grade SRA-C and .0001 for seventh grade GPA. Eighth grade STAN-C scores for SRP students without an eighth grade aggression rating were 53.8, and with aggression 30.8. SRP males with a second grade distinct aggression rating accounted for twenty percent of all SRP students, while females comprised fifteen percent. The SRP male, aggressive population noted a seventh grade GPA of 1.6 as opposed to a GPA of 3.1 for SRP males without eighth grade aggression. Seventh grade GPA for SRP females with eighth grade aggression was .6, for females without aggression is was 3.3. Achievement comparisons found non-significant differences for SRP students without aggression compared to samples of PRO students.

These sub aggressive and non aggressive sample findings suggest that within representational transitional SRP populations containing students who are distinctly aggressive, (close to thirty five percent in the present study, and this is with kindergarten retention offered as an option to SRP placement), the longitudinal academic effectiveness of SRP programing is virtually non existent, since those SRP students with initial behavioral concerns subsequentially achieve poorly academically and behaviorally. Given the extend of 'no treatment effect' findings of most controlled SRP studies, this author wonders if previous findings stem in part, from the presence

of an aggressive SRP student body? How typical is aggression in SRP populations?

Special Education. SRP students were subsequentially referred to and placed into special education by second grade at three and four times the rate of PRO students not recommended for extra-year assignment, and found to exhibit higher referral and placement frequencies than controlled SRP-NP students and HO students, but an equal rate to that of the RET student sample. Studies that have examined the issue of special service placements rate of SRP and promoted samples find similar results (Fishchl, 1994; May, Kundert, Nikoloff, Welch, Garrett & Brent, 1994). Similar second grade special education placement rate for the SRP sample as that of the retained (RET) sample, lend suspect to the thesis that maturation (an extra-year) is all that "at risk" students require. The presence of special education students may have accounted for minimal group results, however without special education students the academic comparisons noted in Table 6 did not change the t-Test values of SRP vs SRP-NP outcomes.

Risk Factors. The most significant identifiable, early risk factors for predictive elementary and middle school poor achievement among SRP students appear as increased age (e.g., older SRP students) and distinct aggressiveness (e.g., an aggression rating of "1" or higher on K-PSF, or "2" aggression in second grade). Age was a negative correlative factor among the SRP at risk sample. Others have noted that younger students in kindergarten do not necessarily do poorer in early school settings (Proctor, Black & Feldhusen, 1986; Spitzer, Cupp & Parke, 1995). The correlation of DOB and STAN-RV was -.34, older students had lower reading vocabulary skills. It may be that a younger student (who tends to be aggressive) import much of the negative achievement and outcome findings reported among young children (Uphoff, Gilmore & Huber, 1986). It appears that older kindergarten students (with delays) are selected for SRP retention despite having skills that are much lower than the younger

kindergarten students also selected for SRP placement. It may be that younger students are placed because they are young (but not actually delayed give age normed standards based upon standardized testings), and that older students are placed, not so much because of maturation (see they are older) but due to behavioral and other concomitants that produce lower skills?

MLofED. The mild SRP-NP advantage (p .10 over SRP) of a higher MLofED (and assumed SES) over the SRP sample can be an important effect on educational outcome. However, when SES has been controlled for by covariate interactions (e.g., see Meisels & Liaw 1993), retained students still show significantly lower grades and test scores than non retained students. When the criteria of MLofED was set at college enrollment or above status of maternal parental education obtainment for the SRP sample, the SRP and SRP-NP seventh grade GPA t-Test comparison p-value was .21 (from .02 for unrestricted SRP MLofED), a mild advantage for the non-placed sample; the SRP and PRO comparison p-value became .42 (from .05 unrestricted), and for PRO and SRP-NP, the p-value became .41 (from .05 unrestricted). SRP's parental level of educational obtainment clearly covary with improved GPA outcomes and most likely other concomitants of family values.

The current study showed the following 'MLofED x seventh grade GPA' correlation coefficients: SRP (.32), HO (.64), RET (.74), SRP-NP (.22) and PRO (-.04). For most samples, MLofED correlates held a moderate correlative power with GPA, but less so on SAT findings. In terms of K-PSF correlates with MLofED, the study samples noted generally negative correlations: SRP (-.40), SRP-NP (-.43), RET (-.33) and PRO (-.09); the higher the parental level of education, the lower their children's level of 'aggression' in kindergarten. Second grade special education placements correlated -.32 with MLofED for the SRP sample.

SRP students with a MLofED of "2 or less" noted a a K-PSF of 2.3, which is 6.4 SEM's (standard error of the mean) higher than the SRP sample as a whole, and over twenty times higher than the average non-retained, promoted student. This sub sample of SRP students from maternal parents with less than a high school education noted a Fall MRT-RC which is -1.8 SEM lower, a BRI-S which was -2.7 SEM lower, and a DOB which is +3.8 SEM higher than the SRP sample as a whole. Parental background of education has a strong negative relationship to measured readiness of students.

Successful SRP Students. Successful SRP students (those noting fiftieth or above on a SRP percentile ranking of their late middle school STAN-C and GPA), noted a similar higher SEM achievement superiority (from that of the SRP sample as a whole) as found in their early readiness profiles. Successful SRP middle school students likely did not gain an educational advantage of a "more successful and productive experience" from SRP placement, since these students reflected favorable initial readiness values.

A third of SRP placed students (most of whom are students with higher initial readiness scores, no aggressiveness, high attentiveness, and who are younger than their SRP counterparts and have higher MLofED, TTR, STAN-RV and STAN-IQ scores), there does 'appear' to be a sustained opportunity from the extra year placement that maintains stabilized achievement with that of the promoted non at risk sample, yet less so for GPA obtainment; however, these successful students are likely to able to adjust to a similar level of success without the SRP retention year since they had initial readiness advantages. Twice the percentage of SRP-NP students maintained a successful middle school achievement than the SRP students, and this without retention.

Successful SRP students were clearly not aggressive, tended to be readier initially, were younger and came from families with a higher MLofED level. Seventeen SRP students noted an eighth grade STAN-C at or above the 48th percentile. These students

averaged the following: a MLofED which is plus 1.0 SEM higher than the SRP sample, a K-PSF which was -2.9 SEM's below the SRP mean, a Fall MRT-RC which is +3.0 SEM, a GES-DD which is -2.1 SEM, a DOB which is -2.5 SEM, and a BRI-S which was +1.9 SEM higher than the SRP sample. Successful SRP students likely did not gain success from SRP placement. Successful SRP students, although younger than most SRP students, had an initial advantage in terms of family, compliant behavior and readiness backgrounds.

In the parent survey, a scale (VALUE) was provided that asked parents to rate the perceived value of education for their children. The correlation of this continuous (Likert-like 1-9) scale with second grade SRA-C was a positive .45 for the SRP sample, with a .21 correlation of VALUE with MLofED, and a .34 with STAN-C. For the SRP sample, eighth grade STAN-RV correlated .41 with VALUE. The correlation for the SRP sample of STAN-RV and MLofED was .29, for the SRP-NP sample it was .85. At risk students that eventually become successful in school tend to have parents that valued the academic success of their children and who were themselves successful in school in terms of level of educational obtainment. Family commitments to education appear important in SRP student outcomes. Lack of such commitment appears important in terms of why students are placed in a retention.

Family Background. SRP students that are successful in middle school (and as noted are likely to succeed without placement) have probable 'self-righting' resiliency and pro-social bonds within school and/or within their family unit (Gullo & Ambrose, 1987; Gullo & Burton, 1992; Henderson & Milstein, 1996). These students may engage and participate in school in pro-social ways, having positive social skills, managing anger, resolving conflicts and setting goals that are positive. Such values are likely obtained from their initial home concomitants. Dubow & Ippolito (1994, p. 410) write:

> a cognitively stimulating and emotionally supportive home environment predicted increases in academic achievement and decreases in anti-social behavior scores during the elementary school years, independent of the effects of poverty and the other risk factors previously enumerated.

and Hart & Risley note(1995, p. 210),

> Our data showed that the magnitude of children's accomplishments depends less on the material and educational advantages available in the home and more on the amount of experience children accumulate with parenting that provides language diversity, affirmative feedback, symbolic emphasis, gentle guidance, and responsiveness.

Behavior vs Readiness. In terms of predictive variance, forty-five percent of predictive (e.g., $R^2$) SRP student performance on second grade SRA-C outcome was obtained from initial (kindergarten) entry factors, with behavioral and demographic indicators (DOB, MLofED, K-PSF, VALUE) adding more weigh (.349 R square) than all initial readiness variables (BRI-S, GES-S, GES-DD, Fall MRT-RC, Fall MRT-QC), a R square of .038 (without DOB) and .058 with DOB. In relative terms, initial kindergarten behavioral and parental factors of placed students accounted for six times the predictive weight on second grade SRA-C outcome than readiness measures.

Meisels (1992, p. 165) notes, "transitional 'readiness' programs,... mistakenly believe that older students will become 'better' students." Parental backgrounds covary with students initial readiness, achievement and temperament/behavioral profiles and accounted for a large proportion of the predictive variance on SRP's early readiness profiles. Research demonstrates that parental backgrounds (e.g., SES, MLofED, etc.) have a strong relationship with children's readiness and

developmental/achievement profile (Ferguson, 1954; Neill & Medina, 1989). Early aggressiveness (e.g., K-PSF) of SRP students noted a consistent mild-to-moderate negative relationship with readiness and later achievement (about a -.40 average in this study across measurements). Meisels found MLofED and SES noted significant effects on both grades and test scores in retained populations (Meisels, 1992; Meisels & Liaw, 1993). This study found a -.39 relationship between MLofED and aggression in kindergarten (K-PSF); that is, as MLofED goes up, the need for early social skills development goes down. Parental/family concomitants pose a valuable and primary source to address if students' longitudinal achievement and school functioning is to be intervened meaningfully.

What Do Readiness Tests Assess? There are strong equity arguments that young children's exposure to early social-cultural, literacy and enrichment opportunities play a significant role on readiness, developmental and maturational test profiles (Bredekamp & Shepard, 1988; Porwancher & DeLisi, 1993). Readiness assessment profiles and at risk designations are influenced by parental backgrounds (Graue, 1991; Mantzicopoulos, 1993; Mantzicopoulos & Morrison, 1994), with retentions four times as frequent among lower SES quartile students than the highest quartile students (Meisels, 1992). Others note a high correlation between readiness tests and measured intelligence (Bradley, 1985; Cosden & Zimmer, 1993; Graue & Shepard, 1989; Liechtenstein, 1990; Kagan, 1990; Rhoten, 1991; Schnaiberg, 1995; Shepard, 1990, 1992). In non-restrictive samples, upwards of forty percent of children of diverse cultural background, indicate eligibility for extra-year placement based solely upon readiness test score profiles (Neill & Medina, 1989).

The child entering school from a family with less educated parents has a much greater change of exhibiting initial social needs, lower readiness, and a lower IQ. This child is several times as likely to be placed by school into a retention year than a

student that comes from a family with educated parents. The present study found a .27 correlation of MLofED with BRI-S and a positive .24 correlation with Spring MRT-RC for the SRP sample. The RET sample's correlation of age (DOB) and MLofED was a negative -.75; that is, older RET students had mothers with a much lower level of education. The RET sample likewise had a negative -.74 correlation of MLofED with seventh grade GPA. The child who tends to be aggressive has a lower MLofED and their kindergarten behavior reflects a significant weakness of social/behavioral adaptability. Measured readiness is also poor, but readiness may be the least of these poor performing (soon to be retained or placed) students' shortcomings since readiness can be boosted (for a year or two), as the Fall-to-Spring MRT SRP findings indicate, but second grade and beyond findings note has dissipated.

The correlative findings of a consistent negative correlation of K-PSF with seventh grade GPA (e.g., -. 50 for SRP, -.43 for RET, -.27 for PRO) denote the predictive power (be it negative) from kindergarten ratings of deficits in personal-social functioning. Of particular is the high negative correlation of -.51 of K-PSF with second grade TTR for the SRP sample. K-PSF correlated .36 with students receiving second grade free/reduced lunch for SRP students. K-PSF held twice the predictive correlation with teacher's TTR than did the Fall MRT-RC for the SRP sample. This author wonders if retention recommendations, which is a judgment made by teachers, comes primarily from the teacher consideration of students' readiness and academic needs, or if the presence of social-behavioral needs of students are cardinal in the recommendation? SRP students noted seven times the number of initial kindergarten social deficits (e.g., K-PSF) as PRO students.

Older and Younger Placed Students. This study found consistent mild-to-moderate negative correlations of age and readiness/achievement among samples designated as at risk, regardless of whether or not they are assigned an extra year. This correlative,

and the descriptive finding that older 'at risk' SRP children do poorer academically than younger 'at risk' children, suggests that the proposed benefit of transitional extra-year programming is generally without merit for older SRP students, or the aggressive student, male or female. The older third of SRP students noted a seventh grade GPA of 2.1 while the youngest third noted a GPA of 2.9. Placed younger SRP students, reflect measured readiness delays that may be due to test norms being normed for Fall, Winter or Spring and not normed based on age norms, scaled in age intervals which most likely suggest that these students are actually achieving within the expected range for their age, especially if same gender age norms are available or norms that take into account that younger students are several months younger than the average kindergartner.

In this study, younger SRP students noted readiness profiles that are statistically higher than older SRP placed students. By second grade, the positive advantage of age (correlation of age x achievement) among the PRO sample is decreased twenty fold from the Spring of kindergarten (MRT-RC) age x readiness advantage, a point that Uphoff (1995, p. 143) does not appear cognitive of since he states, "I am not aware of one single study showing that differences linked to chronological and/or developmental differences disappear in third grade or any other grade."

'Readiness' Misunderstandings. Early childhood educational constructs entail unique, shared and differing sets of psychometrics, theoretics and affiliations:

- readiness (curriculum or academic related skills- "what the child knows or can do"), which are criterion referenced,
- development (often a screening in the identification of children with a disability - "pathologic development"), which are normed referenced,
- maturation (the enigmatic philosophy of Gesell's maturation theory - "biological

maturity" ), which ought to be normed referenced (with scaled scores) with possible differentiating norms for males and females,

- at risk ("the challenging child" with associative credentials), which are criterion referenced, and includes environmental and cognitive influences, and,
- intelligence ("the whole of a range of hierarchical abilities") which are normed referenced.

Conspicuous misunderstandings of these constructs within early school settings are evident (Freberg, 1991; Kagan, 1992; Karweit, 1992; Meisels, 1987, 1989a, 1989b; Shepard, 1990; Sternberg, 1996). Not discounting the considerable breath of environmental influences that are known to influence young children's early measurements of cognition, readiness, development, academic obtainments or requisitions otherwise (see Neill & Medina, 1989), research indicates that most instruments constructed for assessing 'school readiness' provide high measurement error rates and minimal psychometric reliability or validity acceptability (Bradley, 1985; Bredekamp & Shepard, 1988; Cosden & Zimmer, 1993; Drappen & Reynolds, 1981; Graue & Shepard, 1989; Liechtenstein, 1990; Kagan, 1990; Porwancher & DeLisi, 1993; Rhoten, 1991; Schnaiberg, 1995; Shepard, 1990, 1992, 1994; Sizer, 1996). Even if reliable, initial readiness measures do not explain variances that helped establish not only concurrent profiles (comorbidity dynamics of environmental backgrounds), but also predictive profiles of contextual variables on future academic and behavioral outcomes with or without a retention year?[1]

Placed and Promoted Student Background Differences. Parents of children who have been school-designated as 'at risk' and retained, themselves may be less knowledgeable in considering, empowering or even conceptualizing 'school readiness' issues than

parents of promoted students; parents of placed students may in fact have had past experiences of inadequacy and poor academic self-worth. Parents of school-designated (and retained) 'at risk' children may withhold positive interactivist roles with their children, thinking (hoping or not even considering) that the extra-year itself will help their child, as typically told to parents by school officials (e.g., "This 'gift of time' will provide for academic and social growth which should render your child's future schooling a more successful and productive experience.").

Retained children parents are known to exhibit at risk features of parenting (Bryant, Clifford, & Peisner, 1991; Mantzicopoulos & Morrison, 1992). Parental factors appear as a significant influence on the outcomes of placed students, a point noted by others (Love, Logue, Trudeau & Thayer, 1992; Swadener & Lubeck, 1995). Positive parenting interactive features are known as important determinants in early beneficial academic readiness profiles (Earley, 1995; Erhardt & Hinshaw, 1994; Marcon, 1994; Shaeffer & Hook, 1993a, 1993b; Stroud, 1992; Walsh, Ellwein, Eads, & Miller, 1991). How does transitional first grade placements reduce negative parenting effects?

Hollis (1995) found measures of children's social adaptability and persistence in early school settings hold a higher concurrent and predictive relation to school achievement than do early cognitive measures. Others have found aggression and non-compliance as factors that significantly negatively correlate with readiness and achievement outcomes (Clancy & Pianta, 1993; Erhardt & Hinshaw, 1994; Hollis, 1995; Mantzicopoulos & Morrison, 1992; Pellegrini, 1992; Sanson, Smart, Prior & Oberklaid, 1993). High poverty schools denote higher rates of transitional and retention placements than low poverty schools (Love, Logue, Trudeau & Thayer, 1992). From a wealth of studies it is known that retained children reflect distinct categorical attribute differences (within students and their reflective home settings)

than from those of children promoted ahead:

> lower socioeconomic status, greater percentage of minority diversity, more males, lower cognitive abilities, more problematic behaviors, poorer attention spans, poorer motivation, lower language skills, lower levels of parental education, less preschool experience, more single parent households, higher rates of learning, emotional and behavioral problems, and greater special education placement rates (Banerji, 1990; Billman, 1988; Byrd & Weitzman, 1994; Cosden & Zimmer, 1993; Eads, 1990; Gredler, 1992; Holmes, 1989; Kagan, 1992; Karweit,1991; Laidig, 1991; McArthur & Bianchi, 1993; McGill-Frantzen & Allington, 1993; Mantzicopoulos & Morrison, 1992; Meisels, 1992; Meisels & Liaw, 1993; Patton & Wortham, 1993; Shepard, 1990; Shepard & Smith, 1989; Zepeda, 1993).

Students exhibiting these associative and differential qualifications have fewer prior to school influences that are pro-active; they in fact have backgrounds with known negative effects on readiness and early school performances (Dubow & Ippolito, 1994; Hart & Risley, 1995; Rutter, 1985; Swadener & Lubeck, 1995). What is the differential probability that placed students (as opposed to promoted students) have a parent with a history of dropping out of school, aggression or of substance abuse? If the high school dropout rate is three-to-four times higher for retained populations than it is for non-retained populations, what does this statistic say for the long-term benefit of retentions? How does a retention year, as Meisels asked, help students become 'better' students?

Are Retained Students As Capable as Promoted Students? Retained populations typically have a litany of negative correlates within their backgrounds that are not known to be modify by retention nor by age. Within this context it is important to examine two

assumptions of the 'gift of time' argument, an argument which this study clearly highlights as strategic:

- placed children's families can successfully provide necessary financial, emotional, educational and/or custodial support for their children as non-placed or ineligible children, and further,

- placed children have comparable personal, biology, social and cognitive resources to acquire social, academic and psychomotor skills required for success in school as non-placed or ineligible children. (Siegel & Hanson, 1991, p. 15)

This author seriously questions whether retained and non-retained populations hold equal capacities in terms long-term educational performance outcomes unless that which specifically impacts retained students' poor initial educational performance has been successfully addressed (Research for Better Schools, 1991). Aggression is but one factor effecting outcome that can be addressed; recent studies note that decreasing aggressiveness in students can significantly reduced early retention placements (VanSciver, 1993).

The life history among retained populations denote factors that appear to have significant negative effects on educational performance, occurring before, during and after retention (Richardson & Colfer, 1990). Alternative arguments (other than a need for a 'gift of time' extra-year) appear more aptly to account for the poor performance of most students recommended for an extra year. These antecedents and concomitants are suggested to be:

poor psychosocial maturity; poor identity development; negative home/environmental effects; poor personal/social motivation factors; lower

attention span; lack of pro-social involvements in school as a family value; parental interactive patterns with children; lower level of educational skills of parents; perhaps learning styles that are in conflict with sequential/basal curriculums; personality styles; lack of quality parental, attention, guidance given to them; lack of general peer acceptance; lack of adult approval; lower IQ; and specific contextual personal-social-cognitive dynamics of students such a aggressiveness and peer relations.

These variables emerge as probable factors that account for initial and subsequent academic and social performance profiles among children deemed at risk (particularly older children), whether given an extra year or not (Dubow & Ippolito, 1994; Hart & Risley, 1995; Henderson & Milstein, 1996; Research for Better Schools, 1991; Rutter, 1985; Walker, Colvin & Ramsey, 1995). Many of them are not changed by retention placement and may in fact be proliferated in transtional placements.

Five Fallacies of Transitional Programming. First, there will always be younger students in a class, always a third of the population embodied in the bottom of any age, distribution or tier. Why retain students if the deficiencies are within normalcy, i.e., a non significant distribution? Is the answer to this question concerned more with students' diversity, or retaining an institution's grade level/basal curriculum orientation? Second, other than students being older, what is the treatment effect of retaining students? How is age a 'treatment' since students are a year older with or without the extra year? Third, extra-year programming unwittingly create a considerable predicament (Kagan, 1990; May, Kundert, Nikoloff, Welch, Garrett & Brent, 1994; Ostrowski, 1994). As Shepard (1990, p. 175) notes, "The continued escalation of instructional demands in kindergarten and first grade because of readiness testing, retention, and redshirting is perhaps the most serious example of unconsidered policy consequences. Not only do these practices directly exacerbate the problem they

were intended to solve but now the cycle of escalation has a life of its own." With readiness being age-boosted (the bottom tier being given an extra-year), a middle tier is more likely to become the bottom tier, the expectations of first grade increase as more students are retained. State departments of education and national early childhood associations have cautioned or in fact stopped districts against the practice of extra-grade programming (Bredekamp & Shepard, 1988; Cohen, 1990; Ellwein, Walsh, Eads, & Miller, 1991; George, 1993; Marcon, 1994; Meisels, 1987, 1989, 1992, 1995; Rothman, 1990a, 1990b). Fourth, not withstanding noted negative effects from homogeneous, segregated placements (e.g., effects on cognitive, self-esteem, modeling, formative learning experiences, behaviors, etc.), are the dubieties of a number of controversies surrounding transitional placements including fallacious identification measurement procedures, high costs, push for kindergarten academics that create extra-year placements, discriminative inequities, an incredulous 'maturation' construct, legal litigation concerns, "dumb down" curriculum effects, devaluations of appropriate curriculum programming within regular education, uses of readiness tests as curriculums, and the avoidances of confronting challenging social changes without segregative placements for children with diverse backgrounds (Skrtic, 1991).[2]

The Fallacy of Transitional Research. When arriving at school, a common school-designated response for students' low readiness or lack of school progress is to retain, but only when retention is offered within an institution's systemic lack of readiness for a diverse student body (Shaeffer & Hook, 1993b; Shepard, 1991; Shepard and Smith, 1989). When other options (full day kindergarten, tutoring, remedial services, small group instructions, specialized reading programs, parenting support groups, social skills groups, multi-age classrooms, behavioral management programming, entitlement programming, volunteer programs and other direct service intercessions) are available, retention rates are significantly reduced (Shepard & Smith, 1985). Retention, like yelling and or spanking, not need to be administered; however, without

available options and/or administrative restrictions, repeating a grade is likely to be a principal's recourse regardless of its overwhelming documentation as non effective in controlled studies. The proclivity of early grade retention however is likely, in part because retention appears to kindergarten/first grade teachers and parents as a solution to the problem of students' 'unreadiness' for first grade (Doyle, 1989; Shepard, 1991; Tomchin & Impara, 1992; Trimble & Sinclair, 1987).[3]

Future Research. Suggestions for further research are: 1) examine high school dropout rate and differentials thereof within retained and transitioned samples; 2) analyze (via school archival record searches) disciplinary actions, negative comments entered into student's cumulative record, percentage of days absent from school, referrals for outside specialized assistance, and academic referrals among retained and transitioned samples; 3) replicate the study of inverse correlatives of 'age x readiness or achievement' found among samples noted as at risk; 4) study retention rate changes within schools that establish increased options of early interventions addressing the needs of student deemed at risk; 5) qualitative study of teachers' perception of students' negative social-behaviors in teachers decision making process of retention recommendations; 6) qualitative study of the reasons why parents refuse school retention requests; 7) case study of top poor performing SRP students, and likewise for poor high performing SRP students; 8) examine what student qualitative motifs are preferred by teachers' selecting SRP children, especially if kindergarten retention is available; 9) examine (among non aggressive SRP selected students, where age or environmental backgrounds are not deemed a determination factor for measured unreadiness), if learning style is a differential between promoted and transition placed samples; 10) examine (given options of extra-year programming, e.g., retention or SRP), what are the determining dynamics within teachers' decision making that discern which form of retention is chosen; 11) study longitudinal attendance records among transition samples of those who do well in school and those who do poorly, and covarites

of attendance, such as truancy, discipline records, behavioral ratings, family education level; 12) investigate the amount of quality time parents spend with children in placed and non placed transition recommended samples, likewise of TV viewing time or unstructured or unsupervised time; 13) examine what are the determining factors that influence kindergarten teachers recommendation for transition placement and what specific indicators are teachers using for making determinations; 14) profile student outcomes of transition and non transition samples with equal or matched initial profiles of readiness and demographics to investigate if remedial interventions procure similar elementary outcomes for non placed as transition placed samples who are a year younger; 15) study the relationship of early aggressiveness of students and its relationship to early academics and readiness; 16) study parent backgrounds and differentials between retained, transition and promoted samples, especially in terms of known risk factors of educational performance;17) replicate the findings of the sub sample of SRP non-aggressive student comparisons with promoted samples which not similarity of outcomes; 18) determine percentage of retained or transitioned populations which exhibit initial aggressive behavioral patterns as compared to normal samples; and 19) perform a meta-analytic study of SRP outcomes in relation to other forms of retention.

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Footnotes

[1] Even if there is to be a valid theory of maturation and a measurement of 'maturation' age, there would be outstanding concerns of antecedent and concomitant effects of parental backgrounds, home/family environments, and children's cognition/behavior on 'maturational age' measurement, and the assignment of extra-year placement? Such a placement in a transition retention was successfully petitioned in federal court in violation of children's rights, principally criticized in affidavit testimony by experts was the Gesell School Readiness Test as unreliable and invalid violating state and federal laws, thus (the point of the petition), denying children's basic rights (e.g., access to a free education and equal protection under the law) when children had been placed outside of mainstream programming, rather than entering first grade (May, Kundert, Nikoloff, Welch, Garrett & Brent, 1994; Siegel & Hanson, 1991).

[2] Eads (1990; Walsh, Ellwein, Eads & Miller, 1991) noted that measured intelligence may actually decrease after SRP placement. How are young children's cognitive development effected by placement in a self-contained classroom with highly aggressive, mostly male, low income, 'high risk' students who come from family with many 'at risk' features? Where is Frobels' kindergarten (Ruenzel, 1996), if schools reflect negative policies for dealing with diversity (Shepard, 1991)?

[3] Retention may be seen as a "cost saving" entity since there is generally no line item expense encumbered with retaining one or fifty students; some may even see retention as beneficial (Zlatos, 1994).

Table 1
Demographic, Frequency and Teacher Ratings

| Group | Mother's Level of Education | 2nd/8th Grade % AGG | K-PSF | 2nd Grade AGG/SOC | 2nd Grade Self-Esteem | 2nd Grade Success | 2nd Grade Total Teacher Rating | 2nd Grade % Sp. Education | 8th Grade % Sp. Education |
|---|---|---|---|---|---|---|---|---|---|
| SRP | 3.4 (3.5/3.3) | 29/23 | .75 (.77/.74) | .60 (.67/.54) | 17.6 (17.8/17.4) | 18.0 (17.3/18.7) | 107.0 (106.9/107.0) | 23/15 | 13 |
| SRP NP | 3.9 (4.2/3.7) | 05/00 | .31 (.33/.29) | .32 (.44/.20) | 17.4 (17.4/17.3) | 18.2 (18.6/17.9) | 103.7 (100.3/106.8) | 11/05 | 07 |
| PRO | 3.6 (3.5/3.6) | 04/12 | .11 (.19/.00) | .27 (.19/.33) | 19.7 (18.4/20.8) | 19.6 (17.9/21.1) | 112.6 (102.7/120.8) | 07/02 | 00 |
| RET | 3.5 (3.0/4.7) | NA/37 | .87 (1.18/.00) | NA | 15.3(n of 7) | 16.0(n of 7) | 88.4(n of 7) | 27/23 | 11 |
| HO | 4.3 (4.2/5.0) | NA/25 | .00 | NA | 16.8(n of 4) | 17.3 (n of 4) | 98.3 (n of 4) | 20/20 | 08 |

Note. Male and female data is presented (/). NA = Not available. As noted in the text, only about a fourth of the RET and HO samples were teacher rated with the TTR in second grade.

Table 2

7th Grade GPA and 5th Grade SRA-C by Eighth Grade Aggression and Gender

| | Aggression | | | | Gender | | | |
|---|---|---|---|---|---|---|---|---|
| | NO | | YES | | M | | F | |
| | GPA | SRA-C | | GPA | GPA | SRA-C | | GPA |
| SRP | 3.1 | 63.4 | 63.7 | 1.3 | 2.5 | 63.4 | 61.7 | 2.8 |
| SRP-NP | 3.5 | 59.2 | - | - | 3.5 | 55.2 | 63.4 | 3.4 |
| PRO | 3.4 | 76.8 | 56.5 | 1.6 | 2.9 | 69.6 | 79.5 | 3.4 |
| RET | 2.9 | 68.0 | 58.5 | 2.0 | 2.5 | 63.2 | 64.2 | 3.0 |
| HO | 3.6 | 70.8 | 40.7 | 1.9 | 3.1 | 61.3 | 69.0 | 3.4 |
| Mean | 3.3 | 67.6 | 54.8 | 1.7 | 2.9 | 62.5 | 67.6 | 3.2 |

Table 3

7th Grade GPA by Eighth Grade Aggression, Gender and Retention

| | | Gender | | | |
|---|---|---|---|---|---|
| | | M | | F | |
| | | Retained | Not Retained | Retained | Not Retained |
| Aggression | YES | 1.5 | 1.6 | 1.7 | - |
| | NO | 2.9 | 3.3 | 3.2 | 3.4 |

Note. Retention is defined as RET or SRP.



73

Table 4

Longitudinal Readiness and Achievement Composites by Sample and Gender

| Sample | | Pre-K BRI-S | K GES-S/GES-DD | Fall T-1 MET QC / RC | Spring T-1 or K MET QC / RC | 2nd Grade SRA-C | 5th Grade SRA-C | 7th Grade GPA | 8th Grade STAN-C |
|---|---|---|---|---|---|---|---|---|---|
| | M | 85.6 (17) | 63.8 / 6.9 (21) | 35.5 / 37.3 (22) | 83.6 / 85.9 (22) | 65.6 (21) | 63.4 (19) | 2.52 (20) | 49.0 (19) |
| SRP | T | 85.7 (35) | 63.9 / 7.3 (40) | 31.4/ 40.3 (44) | 81.4 / 83.6 (45) | 66.2 (43) | 62.6 (34) | 2.65 (40) | 48.7 (36) |
| | F | 85.9 (18) | 63.9 / 7.8 (19) | 27.4 / 43.3 (22) | 79.4 / 81.4 (23) | 66.8 (22) | 61.7 (15) | 2.78 (20) | 48.3 (17) |
| | M | | 65.7 / 7.4 ( 9) | | | 67.7 (09) | 55.2 (06) | 3.52 (06) | 51.0 (06) |
| SRP-NP | T | NA | 64.5 / 7.7 (19) | NA | NA | 61.1 (19) | 59.2 (14) | 3.46(15) | 44.7 (15) |
| | F | | 63.3 / 8.0 (10) | | | 56.6 (10) | 62.3 (08) | 3.42 (09) | 40.6 (09) |
| | M | | 61.2 / 6.0 ( 8) | | 60.6 / 51.7 (14) | 71.4 (21) | 69.6 (17) | 2.88 (17) | 50.6 (17) |
| PRO | T | NA | 62.8 / 6.2 (12) | NA | 62.3 / 59.0 (31) | 75.9 (44) | 74.4 (33) | 3.14 (33) | 56.8 (30) |
| | F | | 66.0 / 6.5 ( 4) | | 63.8 / 65.1 (17) | 80.0 (23) | 79.5 (16) | 3.42 (16) | 64.8 (13) |
| | M | | 66.6 / 7.7 ( 6) | | | 70.8 (14) | 63.2 (13) | 2.46 (13) | 42.7 (11) |
| RET | T | NA | 66.0 / 8.3 (10) | NA | NA | 72.7 (23) | 63.5 (19) | 2.60 (18) | 46.9 (16) |
| | F | | 65.3 / 9.3 ( 4) | | | 76.0 (09) | 64.2 (06) | 3.04 (05) | 56.0 (05) |
| | M | | | | | 75.9 (09) | 61.3 (09) | 3.07 (09) | 48.0 (08) |
| HO | T | NA | NA | NA | NA | 72.7 (15) | 63.3 (12) | 3.16 (12) | 49.5 (11) |
| | F | | | | | 67.8 (06) | 69.0 (03) | 3.42 (03) | 53.7(03) |

Note. T = Total sample measured. M = Males only. F = Females only. NA = Not Administered. ( ) = s sample size. PRO sample in K is the SR sample. Mean scores for the STAN-IQ for the five groups as presented are: 50.8, 44.1, 56.7, 51.9, and 53.1for HO.

Table 5

Chi-Square p-Values for Nominal Variables

| | Gender (M/F) | Retained/ Non-Retained |
|---|---|---|
| K-PSF | .07 | .05 |
| 2nd Grade Sp. Education Referral | .06 | .01 |
| 2nd Grade Sp. Education Placement | .10 | .01 |
| 8th Grade Aggression | .02 | .01 |

Note. Retention for this analysis is noted by SRP or RET. Aggression is noted as "2" or not. K-PSF as nominal with "0" and "1-6".

Table 6

Summary of t-Test Comparisons from Academic, Behavioral and Demographic Outcomes

| Comparisions | p-Value of Significance (p < .05): | (p <.15 to > .05): | (p > .15): |
|---|---|---|---|
| SRP x SRP-NP | 7th grade GPA<br>2nd & 8th grade AGG | MLofED | All SAT's<br>2nd grade SE, SUCC & AGG/SOC<br>TTR, K-PSF, STAN-IQ |
| SRP x PRO | All SRA's<br>7th grade GPA<br>2nd grade SE, AGG &<br>AGG/SOC, K-PSF | 2nd grade SUCC | MLofED, TTR<br>8th grade AGG<br>STAN-C, STAN-IQ |
| SRP x RET | None | None | All SRA, K-PSF, STAN-C<br>7th grade GPA, MLofED<br>2nd & 8th grade AGG, STAN-I |
| PRO x SRP-NP | All SRA's<br>STAN-IQ | 2nd grade SE<br>STAN-C | 2nd grade SUCC, K-PSF<br>2nd grade AGG & AGG/SOC<br>MLofED, 7th GPA, TTR |
| RET x SRP-NP | 2nd grade SRA<br>7th grade GPA<br>8th grade AGG | None | MLofED, STAN-IQ<br>5th grade SRA, K-PSF, STAN-C |
| PRO x RET | 8th grade AGG<br>7th grade GPA, K-PSF | 5th grade SRA | MLofED, STAN-IQ<br>2nd grade SRA, STAN-C |

Table 7

Correlation of Age-Readiness/Achievement by Measure, Sample and Gender

| Sample | | Pre- K BRI-S | K GES-S/GES-DD | Fall T-1 MET RC | Spring T-1 or K MET RC | 2nd Grade SRA-C | 5th Grade SRA-C | 7th Grade GPA | 8th Grade SRA-C |
|---|---|---|---|---|---|---|---|---|---|
| SRP | M | -.23 (17) | .07/.22 (21) | -.11 (22) | -.10 (22) | -.48 (21) | -.60 (19) | -.22 (20) | -.48 (19 |
| | T | -.37 (35) | .02/.25 (40) | -.22 (44) | -.22 (45) | -.38 (43) | -.58 (34) | -.19 (40) | -.38 (36 |
| | F | -.52 (18) | .23/.26 (19) | -.39 (22) | -.34 (23) | -.22 (22) | -.52 (15) | -.19 (20) | -.22 (17 |
| SRP-NP | T | NA | -.17/.70 (19) | NA | NA | -.30 (19) | -.25 (14) | -.59 (15) | -.43 (15) |
| PRO | M | NA | NA | NA | .48 (14) | -.07 (2 ) | .09 (17) | .02 (17) | -.12 (17) |
| | T | NA | NA | NA | .40 (31) | .09 (44) | .02 (33) | .05 (33) | .04 (30 |
| | F | NA | NA | NA | .29 (17) | .25 (23) | -.18 (16) | .02 (16) | - |
| RET | T | NA | .39/.44 (16) | NA | NA | -.20 (23) | -.07 (19) | -.37 (17) | -.19 (16) |
| HO | T | NA | NA | NA | NA | -.07 (15) | NA | NA | - |

Note. NA = no test administered. T = Total sample. M = Males only. F = Females only. Brigance K &1 Screen (BRI-S) in administered in spring of prekindergarten and The Gesell Readiness Tests (GES-S and GES-DD) administered in spring of kindergarten. Correlates not provided if n is < 14 for sub samples.

Table 8
SRP Correlates with Longintinual Academic Outcomes

| | Outcomes | | | | | | |
|---|---|---|---|---|---|---|---|
| Measures | Fall MRT-RC | Spring MRT RC | 2nd Grade SRA-C | 2nd Grade TTR | 5th Grade SRA-C | 7th Grade GPA | 8th Grade STAN-C |
| MLofED | -.06 | .34 | .14 | .29 | .02 | .32 | .16 |
| BRI-S | .46 | .36 | .21 | .40 | .47 | .38 | .45 |
| GES | .04 | .08 | .07 | .05 | .24 | .09 | .35 |
| G-DD | -.46 | -.47 | -.11 | -.10 | -.32 | -.28 | -.30 |
| K-PSF | -.36 | -.30 | -.19 | -.57 | -.18 | -.50 | -.37 |
| K- CO | -.39 | -.26 | -.32 | -.49 | -.20 | -.49 | -.37 |
| FALL MET RC | - | .34 | .27 | .16 | .47 | .50 | .58 |
| FALL MET QC | .53 | .38 | .16 | .10 | .35 | .23 | .51 |
| SPRING MET RC | - | - | .25 | .12 | .10 | .26 | .28 |
| SPRING MET QC | - | .53 | .08 | .15 | .12 | .36 | .14 |
| T-CSS | - | .47 | .17 | .19 | -.14 | .14 | -.15 |
| 2ND AGGRESS | - | - | -.37 | -.55 | -.40 | -.64 | -.32 |
| 2ND AGG/SOC | - | - | -.48 | -.59 | -.45 | -.52 | -.37 |
| 2ND HYPER | - | - | .05 | -.25 | -.23 | -.07 | -.27 |
| 2ND SE | - | - | .40 | .85 | .36 | .60 | .40 |
| 2ND ATTN | - | - | .46 | .87 | .42 | .55 | .48 |
| TTR | - | - | .46 | - | .36 | .56 | .49 |
| 2ND SRA-R | - | - | .94 | .30 | .79 | .25 | .63 |
| 2ND SRA-C | - | - | - | .35 | .72 | .25 | .64 |
| 5TH SRA-C | - | - | - | - | - | .43 | .85 |

Note. Measures presented in chronological order with single set coefficients. SRA-R = SRA-Reading Composite.